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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,780

03/29/2004

Shinichiro Watanabe

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12/23/2005

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EXAMINER

BANGACHON, WILLIAM L

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/811,780	WATANABE, SHINICHIRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	William Bangachon	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/29/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 8, 11, are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 6 and 11, or 14, 18 and 19, of copending Application No. 10/811,790. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are claiming common subject matter. Claims 1, 2, 6 and 11, or 14, 18 and 19, of '790' reads on claims 1, 8 and 11 of '780'. In this case, although claims 1, 2, 6 and 11, or 14, 18 and 19, of '790' do not disclose expressly "means for switching between two states", it would have been obvious to one of ordinary skill in the art to

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recognize that the charging and discharging circuit of '790' contains a switch for switching between the charging and discharging states.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-2, 8-12 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2292866 (Miyamoto).

In claims 1, 8 and 11, Miyamoto teaches of an electronic circuit for a contactless tag (100, 110-112) as shown in Figures 1-13, comprising:

a transceiving device (16) having an antenna coil {page 12, lines 1+}; and  
means for switching (2, 14) between a state where the antenna coil forms a resonance circuit of the transceiving device and a state where the antenna coil forms a booster circuit {page 13, 5+}.

In claims 2 and 12, the means for switching (2, 14) switches between the two states based on an electromotive force induced by the antenna coil due to electromagnetic induction {page 14, lines 5+}.

In claims 9 and 18, the transceiving device (16) is brought into close proximity to a reader/writer for data communication {page 16, last paragraph; page 18, last paragraph}.

In claim 10 and 19, the antenna coil resonates according to a power supplied from the reader/writer when it is brought into close proximity to the reader/writer {page 16, last paragraph; page 18, last paragraph}.

Claim 20 recites a method for practicing the tag of claims 11 and 19, and therefore rejected for the same reasons.

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7. Claims 1-2, 8-12 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by USP 6,489,883 (Iiyama et al).

In claims 1, 8 and 11, Iiyama et al teach of an electronic circuit for a contactless card (tag) {col. 1+}, comprising:

a transceiving device (1) having an antenna coil {col. 1, lines 21-27; paragraph bridging cols. 1 and 2}; and

means for switching (4) between a state where the antenna coil forms a resonance circuit of the transceiving device (1) and a state where the antenna coil forms a booster circuit {paragraph bridging cols. 3 and 4}.

In claims 2 and 12, the means for switching (2, 14) switches between the two states based on an electromotive force induced by the antenna coil due to electromagnetic induction {col. 1, lines 21-27; paragraph bridging cols. 1 and 2}.

In claims 9 and 18, the transceiving device (16) is brought into close proximity to a reader/writer for data communication {col. 1, lines 21-27; paragraph bridging cols. 1 and 2}.

In claim 10 and 19, the antenna coil resonates according to a power supplied from the reader/writer when it is brought into close proximity to the reader/writer {col. 1, lines 21-27; paragraph bridging cols. 1 and 2}.

Claim 20 recites a method for practicing the tag of claims 11 and 19, and therefore rejected for the same reasons.

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8. Claims 3-5 and 13-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2292866 (Miyamoto).

In claims 3-4 and 13-14, Miyamoto do not disclose expressly “the changeover switch having **a first connection terminal for the resonance circuit and a second connection terminal for the booster circuit, which are sequentially connected to the antenna coil according to a circuit changeover control signal**”. However, the positioning of the changeover switch, as claimed, is just a matter of design choice and would have been obvious in the system of Miyamoto, to one of ordinary skill in the art, because changing the arrangement of the connection of the changeover switch of Miyamoto will not modify the operation of the chargeable card of Miyamoto. See *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

the electronic circuit further comprises:

means for rectifying the electromotive force (18a-d) via the first connection terminal to generate a rectified voltage;

first (16b) and second capacitors (19) connected in parallel to the means for rectifying for storing the rectified voltage;

a battery (1) connected to the second connection terminal;

means for generating the circuit changeover control signal and a switching driving signal (14) based on the rectified voltage {page 18, 2<sup>nd</sup> paragraph}; and

a charge pump that is turned on and off according to the switching driving signal when the booster circuit is formed according to the circuit changeover control signal, and that causes a first current that is conducted through the

antenna coil from the battery to flow so as to store a charge in the antenna coil during an ON time, while supplying a boosted voltage based on a counter electromotive force generated in the antenna coil to the second capacitor so as to cause a second current to flow to the second capacitor from the antenna coil during an OFF time {col. 18, lines 9+}.

In claims 5 and 15, Miyamoto the electronic circuit for a contactless tag, further comprising a means for detecting the rectified voltage, wherein the battery is connected to the second connection terminal via the means for generating according to the detected rectified voltage {page 16, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs}.

9. Claims 6 and 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2292866 (Miyamoto) in view of USP 6,489,883 (Iiyama et al).

In claims 6 and 16, Miyamoto do not disclose **“a means for detecting a voltage of the battery, wherein the circuit changeover control signal is generated based on the detected voltage of the battery”**. Iiyama et al is relied upon to teach of a means for detecting a voltage of the battery as claimed in order for the non-contact card to operate when the question unit is away from the card and would continue to operate reliably even when the battery voltage is low {Iiyama et al, col. 6, lines 47+}. Obviously, knowing when to charge the battery is beneficial in the system of Miyamoto. The systems of Miyamoto and Iiyama et al are analogous art because they are in the same field of endeavor, dual mode non-contact card and both patents are concerned with

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extending battery life. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to have a means for detecting a voltage of the battery in the system of Miyamoto, in order for the tag to operate reliably, as taught by Iiyama et al.

### ***Allowable Subject Matter***

10. Claims 7 and 17 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter:

In combination with other elements in the claims, Miyamoto or Iiyama et al do not disclose a means for generating the circuit changeover control signal and a switching driving signal based on the rectified voltage comprising "an antenna changeover circuit that generates the circuit changeover control signal based on the rectified voltage or the voltage of the battery and a field-effect transistor (FET) control circuit that generates a switching gate signal having a duty ratio corresponding to a predetermined ratio of an ON-OFF operation according to the circuit changeover control signal".

### ***Office Contact Information***

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to William Bangachon whose telephone number is **(571)-272-3065**. The Examiner can normally be reached on 4/4/10.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Horabik can be reached on **(571)-272-3068**. The fax phone numbers for the organization where this application or proceeding is assigned is **571-273-8300** for regular and After Final formal communications. The Examiner's fax number is **(571)-273-3065** for informal communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



William L. Bangachon  
Examiner  
Art Unit 2635

December 12, 2005

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